

Machining Recommendations for TRIDEEP Drills (12.00-32.00)

ISO	Material	Condition	Tensile Strength [N/mm ²]	Hardness HB	Material Group No.	LOGT / TOGT											
						V m/min	Feed per insert size "GF" & "DT"										
							06	07	08	09		10		11		12	13
							mm/rev										
P	non-alloy steel and cast steel, free cutting steel	< 0.25 %C	annealed	420	125	1	80-120 80-120	0.04-0.08 0.08-0.14	0.04-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.12 0.08-0.18					
		≥0.25% C	annealed	650	190	2											
		< 0.55 %C	quenched and tempered	850	250	3											
		≥0.55% C	annealed	750	220	4											
			quenched and tempered	1000	300	5											
	low alloy and cast steel (less than 5% of alloying elements)	annealed	600	200	6	0.04-0.12 0.06-0.20											
		quenched and tempered	930	275	7												
			1000	300	8												
			1200	350	9												
	high alloyed steel, cast steel and tool steel	annealed	680	200	10												
		quenched and tempered	1100	325	11			0.04-0.08 0.08-0.14	0.04-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.12 0.08-0.18					
	stainless steel and cast steel	ferritic/martensitic	680	200	12												
		martensitic	820	240	13												
M	stainless steel and cast steel	austenitic, duplex	600	180	14		50-100 50-100	0.02-0.06 0.04-0.12	0.02-0.06 0.04-0.12	0.02-0.06 0.04-0.12	0.02-0.06 0.04-0.12	0.02-0.06 0.04-0.12					
K	grey cast iron (GG)	ferritic/pearlitic		180	15		50-100 80-120	0.03-0.15 0.08-0.25	0.03-0.15 0.08-0.25	0.05-0.18 0.08-0.25	0.05-0.18 0.08-0.30	0.05-0.18 0.08-0.30					
		pearlitic / martensitic		260	16												
	cast iron nodular (GGG)	ferritic		160	17												
		pearlitic		250	18												
	malleable cast iron	ferritic		130	19												
		pearlitic		230	20												
N	aluminum-wrought alloys	not hardenable		60	21	80-160 80-160	0.03-0.15 0.08-0.20	0.03-0.15 0.08-0.20	0.03-0.18 0.08-0.20	0.05-0.18 0.08-0.20	0.05-0.18 0.08-0.20						
		hardenable		100	22												
	aluminum-cast alloys	≤12% Si	not hardenable		75							23					
			hardenable		90							24					
		>12% Si	high temperature		130							25					
	copper alloys	>1% Pb	free cutting		110							26					
			brass		90							27					
			electrolitic copper		100							28					
	non metallic	duroplastics, fiber plastics										29					
		hard rubber										30					
S	high temp. alloys	Fe based	annealed		200	31	20-50 20-50	0.04-0.08 0.08-0.14	0.04-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.12 0.08-0.18					
			hardened		280	32											
		Ni or Co based	annealed		250	33											
			hardened		350	34											
	titanium alloys	cast		320	35												
		pure	400		36												
		alpha+beta alloys hardened	1050		37												
H	hardened steel	hardened 55 HRC			38	20-50 20-50	0.04-0.08 0.08-0.14	0.04-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.10 0.08-0.16	0.06-0.12 0.08-0.18						
		hardened 60 HRC			39												
	chilled cast iron	cast		400	40												
	cast iron	hardened 55 HRC			41												